UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/002,885	11/02/2001	Michael L. Boucher	30014200-1001	8291

26263	7590	10/21/2005

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EXAMINER
BONZO, BRYCE P

ART UNIT	PAPER NUMBER
2113	

DATE MAILED: 10/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Office Action Summary	Application No.	Applicant(s)
		10/002,885	BOUCHER ET AL.
		Examiner	**Art Unit**
		Bryce P. Bonzo	2114

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>27 July 2005</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-73</u> is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-73</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>02 November 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some *   c)☐ None of:

         1.☐ Certified copies of the priority documents have been received.

         2.☐ Certified copies of the priority documents have been received in Application No. _____.

         3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
     Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

FINAL OFFICIAL ACTION

Status of the Claims

Claims 1-73 are rejected under 35 USC §102(b).

Rejections under 35 USC §102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form

the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign

country or in public use or on sale in this country, more than one year prior to the date of

application for patent in the United States.

Claims 1-73 are rejected under 35 U.S.C. 102(b) as being anticipated by Chen (United

States Patent No. 5,553,235).

As per the claims, Chen discloses:

1. A method in a data processing system having a program with a plurality of threads

having a plurality of states, the method comprising the steps of:

        running the program and determining the state of each thread during a

measuring period, wherein the measuring period comprises a plurality of time intervals

(Table 2, Figure 2e, Figure 26, column 23);

receiving user input indicating a selected one of the plurality of states (column 24, lines 45-52);

receiving user input indicating a selected one of the plurality of threads (column 24, lines 53-63);

determining a portion of the measuring period during which the selected thread is in the selected state (Figure 12e this determination must be performed to manufacture this graph);

determining, during the portion of the measuring period, whether another thread other than the selected thread is in another state other than the selected state (column 23); and

when it is determined that the other thread is in the other state, determining an amount of time that the other thread is in the other state (column 23).

2. The method of claim 1, further comprising the step of calculating a percent of the portion of the measuring period that constitutes the amount of time that the other thread is in the other state (column 23, lines 43-59).

3. The method of claim 1, further comprising the steps of:

determining, during the portion of the measuring period, whether the other thread is in the selected state (column 23, lines 43-59);

when it is determined that the other thread is in the selected state, determining a

second amount of time that the other thread is in the selected state (column 23, lines

43-59); and

calculating a percent of the portion of the measuring period that constitutes the

second amount of time that the other thread is in the selected state (column 23, lines

43-59).

4   A method in a data processing system having a program with a plurality of threads

having a plurality of states, wherein the program executes during a measuring period

and the measuring period comprises a plurality of time intervals, the method comprising

the steps of (Table 2, Figure 2e, Figure 26, column 23):

receiving user input indicating one of the plurality of states to anchor (column 24,

lines 45-52);

receiving user input indicating a selected one of the plurality of threads (column

24, lines 45-52);

determining a portion of the measuring period during which the selected thread is

in the anchored state (figure 12e);

determining, during the portion of the measuring period, whether another thread

other than the selected thread is in another state other than the anchored state (column

23); and

when it is determined that the other thread is in the other state, determining an

amount of time that the other thread is in the other state (column 23).

5. The method of claim 4, further comprising the step of calculating a percent of the portion of the measuring period that constitutes the amount of time that the other thread is in the other state (column 23, lines 43-59).

6. The method of claim 4, further comprising the steps of:

determining, during the portion of the measuring period, whether the other thread is in the anchored state (column 23, lines 43-59);

when it is determined that the other thread is in the anchored state, determining a second amount of time that the other thread is in the anchored state (column 23, lines 59); and

calculating a percent of the portion of the measuring period that constitutes the second amount of time that the other thread is in the anchored state (column 43-59).

7. A method in a data processing system having a program with a plurality of threads having a plurality of states, wherein the program executes during a measuring period and the measuring period comprises a plurality of time intervals, the method comprising the steps of (Table 2, Figure 2e, Figure 26, column 23):

receiving user input indicating a selected one of the plurality of states (column 24, lines 45-52);

receiving user input indicating a selected one of the plurality of threads (column 24, lines 45-52); and

determining a portion of the measuring period during which the selected thread is in the selected state (column Figure 12e).

8. The method of claim 7, further comprising the steps of:

determining, during the portion of the measuring period, whether another thread other than the selected thread is in another state other than the selected state (column 24, lines 45);

when it is determined that the other thread is in the other state, determining an amount of time that the other thread is in the other state (column 24, lines 45-52); and

calculating a percent of the portion of the measuring period that constitutes the amount of time that the other thread is in the other state (column 23, lines 43-59).

9. The method of claim 7, further comprising the steps of:

determining, during the portion of the measuring period, whether another thread other than the selected thread is in the selected state (column 23, lines 43-59);

when it is determined that the other thread is in the selected state, determining an amount of time that the other thread is in the selected state (column 23, lines 43-59); and

calculating a percent of the portion of the measuring period that constitutes the amount of time that the other thread is in the selected state (column 23, lines 43-59).

10. A method in a data processing system having a program with a plurality of states, wherein the program executes via a plurality of paths during a measuring period, the method comprising the steps of:

receiving user input indicating a selected one of the plurality of states (column 24, lines 45-52);

receiving user input indicating a selected one of the plurality of paths of execution (column 53-63); and

determining a portion of the measuring period during which the selected path of execution is in the selected state (Figure 12e).

11. A method in a data processing system having a program with a plurality of threads having a plurality of states, the method comprising the steps of:

running the program and determining the state of each thread during a measuring period, wherein the measuring period comprises a plurality of time intervals (column 23, table 2, figures 12e and 26);

receiving user input indicating a selected one of the plurality of states (column 24, lines 45-52);

receiving user input indicating a selected one of the plurality of threads (column 23, lines 53-63);

determining a portion of the measuring period during which the selected thread is in the selected state (column 23);

determining, during the portion of the measuring period, whether another thread

other than the selected thread is in the selected state (column 23); and

when it is determined that the other thread is in the selected state, determining

an amount of time that the other thread is in the selected state (column 23, lines 43-59).

12. The method of claim 11, further comprising the step of calculating a percent of the

portion of the measuring period that constitutes the amount of time that the other thread

is in the selected state (column 23, lines 43-59).

13. A method in a data processing system having a program with a plurality of threads

having a plurality of states, wherein the program executes during a measuring period

and the measuring period comprises a plurality of time intervals, the method comprising

the steps of:

receiving user input indicating one of the plurality of states to anchor (column 24,

lines 45-52);

receiving user input indicating a selected one of the plurality of threads (column

24, lines 53-63);

determining a portion of the measuring period during which the selected thread is

in the anchored state (column 12e);

determining, during the portion of the measuring period, whether another thread

other than the selected thread is in the anchored state (column 23); and

when it is determined that the other thread is in the anchored state, determining

an amount of time that the other thread is in the anchored state (column 23).

14. The method of claim 13, further comprising the step of calculating a percent of the

portion of the measuring period that constitutes the amount of time that the other thread

is in the anchored state (column 23, lines 43-59).

15. A method in a data processing system having a program with a plurality of threads

having a plurality of states, the method comprising the steps of:

running the program and determining the state of each thread during a

measuring period, wherein the measuring period comprises a plurality of time intervals

(column 23, table 2, figures 12e and 26);

receiving user input indicating a selected one of the plurality of states)column

24, lines 45-52);

determining a portion of the measuring period during which any of the plurality of

threads is in the selected state (column 24, lines 53-63);

determining, during the portion of the measuring period, whether a selected one

of the plurality of threads is in another state other than the selected state (column 23);

and

when it is determined that the selected thread is in the other state, determining

an amount of time that the selected thread is in the other state (column 23).

16. The method of claim 15, further comprising the step of calculating a percent of the portion of the measuring period that constitutes the amount of time that the selected thread is in the other state (column 23, lines 43-59).

17. The method of claim 15, further comprising the steps of:

determining, during the portion of the measuring period, whether the selected thread is in the selected state (column 43-59);

when it is determined that the selected thread is in the selected state, determining a second amount of time that the selected thread is in the selected state (column 23, lines 43-59);

and calculating a percent of the portion of the measuring period that constitutes the second amount of time that the selected thread is in the selected state (column 23, lines 43-59).

18. A method in a data processing system having a program with a plurality of threads having a plurality of states, wherein the program executes during a measuring period and the measuring period comprises a plurality of time intervals, the method comprising the steps of:

receiving user input indicating one of the plurality of states to anchor (column 24, lines 45-52);

determining a portion of the measuring period during which any of the plurality of threads is in the anchored state (column Figure 12e);

determining, during the portion of the measuring period, whether a selected one of the plurality of threads is in another state other than the anchored state (column 23); and

when it is determined that the selected thread is in the other state, determining an amount of time that the selected thread is in the other state (column 23).

19. The method of claim 18, further comprising the step of calculating a percent of the portion of the measuring period that constitutes the amount of time that the selected thread is in the other state (column 23, lines 43-59).

20. The method of claim 18, further comprising the steps of:

determining, during the portion of the measuring period, whether the selected thread is in the anchored state (column 23, lines 43-59);

when it is determined that the selected thread is in the anchored state, determining a second amount of time that the selected thread is in the anchored state (column 23, lines 43-59);

and calculating a percent of the portion of the measuring period that constitutes the second amount of time that the selected thread is in the anchored state (column 23, lines 43-59).

21. A method in a data processing system having a program with a plurality of threads having a plurality of states, wherein the program executes during a measuring period

and the measuring period comprises a plurality of time intervals, the method comprising the steps of:

receiving user input indicating a selected one of the plurality of states (column 24, lines 45-52); and

determining a portion of the measuring period during which any of the plurality of threads is in the selected state (column 12e).

22. The method of claim 21, further comprising the steps of:

determining, during the portion of the measuring period, whether a selected one of the plurality of threads is in another state other than the selected state (column 23);

when it is determined that the selected thread is in the other state, determining an amount of time that the selected thread is in the other state (column 23); and

calculating a percent of the portion of the measuring period that constitutes the amount of time that the selected thread is in the other state (column 23, lines 43-59).

23. The method of claim 21, further comprising the steps of:

determining, during the portion of the measuring period, whether a selected one of the plurality of threads is in the selected state (column 23);

when it is determined that the selected thread is in the selected state, determining an amount of time that the selected thread is in the selected state (column 23); and

calculating a percent of the portion of the measuring period that constitutes the amount of time that the selected thread is in the selected state (column 23).

24. A method in a data processing system having a program with a plurality of states, wherein the program executes via a plurality of paths during a measuring period, the method comprising the steps of:

receiving user input indicating a selected one of the plurality of states (column 24, lines 45-52); and

determining a portion of the measuring period during which any of the plurality of paths of execution is in the selected state (column 12e).

25. A method in a data processing system having a program with a plurality of threads having a plurality of states, the method comprising the steps of:

running the program and determining the state of each thread during a measuring period, wherein the measuring period comprises a plurality of time intervals (column 23, Figures 12e and 26, and table 2);

receiving user input indicating a selected one of the plurality of states (column 24, lines 45-52);

determining a portion of the measuring period during which any of the plurality of threads is in the selected state (column 12e);

determining, during the portion of the measuring period, whether a selected one of the plurality of threads is in the selected state (column 23); and

when it is determined that the selected thread is in the selected state, determining an amount of time that the selected thread is in the selected state (column 23).

26. The method of claim 25, further comprising the step of calculating a percent of the portion of the measuring period that constitutes the amount of time that the selected thread is in the selected state (column 23).

27. A method in a data processing system having a program with a plurality of threads having a plurality of states, wherein the program executes during a measuring period and the measuring period comprises a plurality of time intervals, the method comprising the steps of:

receiving user input indicating one of the plurality of states to anchor (column 24, lines 45-52);

determining a portion of the measuring period during which any of the plurality of threads is in the anchored state (column 2, lines 45-52);

determining, during the portion of the measuring period, whether a selected one of the plurality of threads is in the anchored state (column Figure 12e); and

when it is determined that the selected thread is in the anchored state, determining an amount of time that the selected thread is in the anchored state (column 23).

28. The method of claim 27, further comprising the step of calculating a percent of the portion of the measuring period that constitutes the amount of time that the selected thread is in the anchored state (column 23).

Claims 29-56 are the computer instruction implementation of the method of claims 1-28 and are rejected on the same grounds show above.

Claims 57-73 are the data system implementation of the method claims 4, 7-9, 13, 14, 18-23, 25, 26 and 10 respectively and are rejected on the same grounds.

Response to Applicant's Arguments

I. Applicant argues that Chen does not disclose statistics over time. Figure 12C clearly shows multiple statistics over time, specifically 12:12:00 to 12:13:00.

II. Applicant argues that "Chen et al. does not disclose or suggest running a program with a plurality of threads having multiple states, wherein a state refers to "the portion of a program (for example, set of instructions such as subprogram, loop or other code block) that the processor is executing during a particular time interval. (specification)". Upon a thorough review of claim 1, the Examiner has been unable to locate this specific passage of the specification in claim 1 or the other independent claims. As such, Applicant has either incorrectly attempted in invoke 35 USC §112, Sixth paragraph in a

claim which is not written in means plus function language, or has improperly argued

limitation not found in the claims.

III. Analyzing as argued in the response is not present in claim 1.

IV. Applicant further argues:

1. Chen does not disclose "running a program with a plurality of threads...

selected state". As stated in the Official Action, this must occur to produce the graphs

shown in 12e with illustrate these vary processes' properties.

2. Chen does not disclose "determining whether... the selected state." Column

23, lines 43-59 is specific instructions for displaying this very information.

3. Chen does not disclose "determining an amount ... the other state." Column

24, lines 20-53 describe the display of this data and as such it must clearly have been

identified and collected.

V. Claims 4-73 do not contain all the limitations as whole of claim 1 and therefore the

arguments presented are not convincing to the Examiner.

Final Disposition

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.
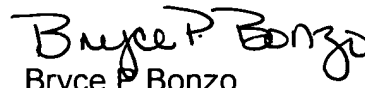
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bryce P. Bonzo whose telephone number is (571)272-3655. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Beausoliel can be reached on (571)272-3645. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Bryce P Bonzo
Primary Examiner
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